

CLAIMS:

1. A method for forming a metal film on a non-circuit-formed surface of a semiconductor wafer, wherein a metal film is formed by applying an adhesive film, comprising an adhesive layer formed on one surface of a base film comprising at least one film layer having a gas transmission rate of not more than $5.0 \text{ cc/m}^2 \cdot \text{day} \cdot \text{atm}$, to a circuit-formed surface of a semiconductor wafer (a non-metal-film-formed surface).
2. The method for forming a metal film on a non-circuit-formed surface of a semiconductor wafer according to claim 1, wherein the base film comprises a metal film layer or a metal oxide film layer, and at least one film layer having a gas transmission rate of not more than $5.0 \text{ cc/m}^2 \cdot \text{day} \cdot \text{atm}$.
3. The method for forming a metal film on a non-circuit-formed surface of a semiconductor wafer according to claim 1, wherein the base film comprises at least one film layer having a gas transmission rate of not more than $1.0 \text{ cc/m}^2 \cdot \text{day} \cdot \text{atm}$ and water absorptance of not more than 1.0 weight %.
4. The method for forming a metal film on a non-circuit-formed surface of a semiconductor wafer according to any one of claims 1 to 3, wherein the base film further comprises one film layer selected from an ethylene-vinyl acetate copolymer, polyester and polyethylene.
5. The method for forming a metal film on a non-circuit-formed surface of a semiconductor wafer according to any one of claims 1 to 3, wherein the adhesive layer has a storage elastic modulus of not less than $1 \times 10^5 \text{ Pa}$ at 150°C .

6. An adhesive film for forming a metal film on a non-circuit-formed surface of a semiconductor wafer, comprising an adhesive layer formed on one surface of a base film comprising at least one film layer having a gas transmission rate of not more than $5.0 \text{ cc/m}^2 \cdot \text{day} \cdot \text{atm}$.

7. An adhesive film for forming a metal film on a non-circuit-formed surface of a semiconductor wafer, comprising an adhesive layer formed on one surface of a base film comprising at least one film layer having a gas transmission rate of not more than $1.0 \text{ cc/m}^2 \cdot \text{day} \cdot \text{atm}$ and water absorptance of not more than 1.0 weight %.